

A NEW GENUS AND SPECIES OF THE SUBFAMILY
TRIATOMINAE (REDUVIIDAE: HEMIPTERA).

By H. G. BARBER,

Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.

PARATRIATOMA, new genus.

Head elongate oval, scarcely shorter than pronotum, vertex very convex; eyes rather small, not strongly projected, each much narrower than width of vertex; preocular region distinctly longer than postocular, transversely impressed behind the strongly elevated tylus, devoid of an arcuate preocellar sulcus. Ocelli slightly elevated, widely separated. Antennae inserted closer to eyes than to apex of head, formed as in *Triatoma*; basal segment short, not quite reaching to apex of head. Rostrum stout, nearly straight, apposed to ventral surface of head. Pronotum somewhat wider than long; the transverse impression placed well before the middle; disk of anterior lobe strongly, convexly elevated on each side of a deep longitudinal impression; posterior lobe with a median, longitudinal, shallow impression bounded on each side by a low rounded ridge. Scutellum devoid of a discal depressed area, prolonged into a cylindrical, apical process. Prosternum longitudinally sulcate. Legs rather short, scarcely incrassate, mutic: anterior tibia devoid of an apical spongy fossa. Entire body and the appendages sparsely covered with long, coarse hairs.

Type of the genus *Paratriatoma hirsuta*, new species.

The genus *Paratriatoma* is most closely related to *Triatoma*, from which it may be distinguished by the ovoidal shape of the head, the absence of an arcuate interocellar sulcus, the absence of femoral spines or tubercles, and particularly in the remarkable hirsuteness of the body and of the appendages.

Paratriatoma hirsuta, new species.

Narrowly oval; hirsute; slightly shiny; sordid ochraceous, scutellum and disk of the corium slightly infuscated, legs stramineous. Head with numerous long, coarse, curved, black hairs; the strongly convex interocellar region or vertex nearly four times as wide as an eye; dorso-ventral length of eye much shorter than corresponding dimension of head, the two eyes widely separated on the gula; anterior region before antenniferous tubercles with lateral margins not parallel but gradually converging anteriorly to apex of juga; preocular lateral margin to apex of antenniferous tubercles somewhat shorter than postocular margin, the latter, as seen from above, very slightly convex and abruptly contracted to collum. Ocelli large, slightly elevated, each situated behind inner margin of an eye. Antenna with basal two segments covered with proclinate, black hairs which on the second segment are much longer than the width of the segment; basal segment not quite reaching apex of head, a little more incrassate than second segment, which is about three times as long as basal; last two segments slender, with scattered, fine, oblique hairs which are three or four times as long as the width of the segments. Rostrum sparsely hirsute; apex attaining middle of prosternal sulcus; basal segment over one-half as long as second, third segment nearly one-half as long as second. Pronotum posteriorly nearly one-third wider than long; the outer anterior angle slightly produced in an

obtusely rounded tubercle; lateral margin of posterior lobe, anteriorly, lightly impressed; humeral angles bluntly rounded. Scutellum somewhat elevated, disk roughly corrugated, cylindrical apical process about as long as remainder of scutellum. Connexivum immaculate, dorsally narrowly exposed beyond costal margin of corium, ventrally very narrowly exposed beyond lateral margins of ventral sclerites. Femora and tibiae with long, inclined, black hairs, denser on tibiae. Length 13-14.5 mm.

Type male, U. S. National Museum, Cat. No. 52747, Mojave, Calif., Aug. 23, 1935 (J. W. Vernon). Paratypes: Two males, Phantom Ranch, Grand Canyon, Ariz., May, 1929 (Vernon Bailey); female, with the same data as type; one nymph, Phantom Ranch, Grand Canyon, Ariz., May 1929 (Vernon Bailey) and two nymphs, Shoshone, Calif., April 1921 (H. J. Lind).

Nothing is known concerning the habits of this species beyond a report from J. W. Vernon that the specimens from Mojave had attacked man.

SEX DETERMINATION IN THE HONEYBEE.

By W. J. NOLAN.

The story of sex determination in the honeybee is linked with the name of Dzierzon, who about eighty years ago established the fact that drones can arise from unfertilized eggs and that queens and workers arise from fertilized eggs. His results, obtained by crossing the yellow Italian with the European brown bee, indicated that this is the only way in which male and female bees are produced.

Final evidence that the drone arises only from unfertilized eggs and the female from fertilized eggs seemed to be given by Nachtsheim's cytological study of the European brown bee, in which he showed that the drone has only the haploid number of chromosomes whereas the female has the diploid number. Nachtsheim also set forth the view that sex in the bee is determined by the number of X chromosomes present, one X chromosome causing a male to develop and two X chromosomes a female.

The foregoing ideas are not entirely in accord with certain more recent findings in the honeybee or in the hymenopteran *Habrobracon juglandis* Ashm., nor do they permit the explanation of sex determination in the honeybee on the basis of modern genetic conceptions regarding other forms. Thus, although the development of males from unfertilized eggs remains unques-